

Original Paper

Assessment of Informal Settlements Growth in Greater Karu

Urban Area (GKUA) Nasarawa State, Nigeria

Laraba S. Rikko^{1*}, John. Y. Dung-Gwom¹ & Sunday K. Habila²

¹ Department of Urban and Regional Planning, University of Jos, Nigeria

² Department of Urban and Regional Planning, Ahmadu Bello University Zaria, Nigeria

* Laraba S. Rikko, Department of Urban and Regional Planning, University of Jos, Nigeria

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Abstract

The proliferation of informal settlements in developing countries have become a major concern to governments and professionals in the built environment in recent years. This paper assessed informal human settlements in a rapidly urbanizing and growing urban area; the Greater Karu Urban Area (GKUA) in Nasarawa State of Nigeria. Information for the paper were obtained through the administration of a questionnaire on the residents and from published and official records. Data was collected from 4 out of 17 identified informal settlements; Mararaba, Masaka, New Nyanya and Kuchikau in GKUA. Questionnaires were administered to 10% (253) households' randomly selected based on their availability and willingness to participate in the study. From 241 (95.4%) questionnaires that were returned, two types of informal settlements were identified: inner core (traditional slums) and the peri-urban informal/unplanned settlements/slums. The inner core slums showed very severe challenges pertaining to minimal and inadequate social amenities and infrastructure, poor sanitation, narrow winding road networks while the absence of social services and infrastructure, unplanned and uncontrolled development, and substandard housing of mixed quality characterised peri-urban slums. Residents perceived that internal and external drivers contributed to the rapid growth of informal settlements in GKUA. A Comprehensive and holistic spatial vision of the area that could promote and sustain physical, social, economic and environmental planning policies in a coordinated manner is urgently needed.

Keywords

informal settlements, urban growth drivers, Greater Karu Urban Area (GKUA), growth management

1. Introduction

Informal settlements are a major landscape and characteristic of Greater Karu Urban Area (GKUA) in Karu Local Government Area of Nasarawa State. The proliferation of slums and informal settlements have constituted a serious concern to the government, urban managers, professionals in the built environment and the residents. Greater Karu Urban Area adjoins the Federal Capital Territory (FCT) of Nigeria to the east along the Abuja-Keffi axis. Currently, settlements in the area meet an important need and represent virtually the most viable accommodation option for over 60% of the inhabitants (especially the low and middle income earners) who work in the Federal Capital City (FCC) and elsewhere in the Federal Capital Territory (FCT) (Rikko, 2016). Consequently, settlements in GKUA are experiencing rapid and unprecedented urbanisation and population growth fuelled largely by immigration of people seeking job opportunities and better life in the capital city Abuja. This raised the population of the settlements from a mere 216, 230 people in 2006 to more than 2 million in 2012 (NPC, 2006; Vilo, 2012) resulting to an explosion in the growth (both in size and number) of unplanned and uncontrolled settlements. Similarly, the inability of urban managers and government to cope with the high demand and competition for land, housing accommodation, infrastructure and service provision encouraged private land speculation and provided opportunity for informal and unregulated land acquisition which in turn led to rapid development of settlements that are self-regulated and devoid of any spatial planning principles or regulations.

UN-Habitat (2012); Rikko, Dung Gwom and Lohor (2013) have also observed that the emergence and development of informal settlements in GKUA is a consequent and ripple effect of their proximity to the federal capital and the inability of the federal capital administration to adequately meet the housing and infrastructural needs of particularly the low and medium income workers of the FCT. These experiences have increased greater challenges on city managers/planning institutions capacity to cope with the responsibility of effective control of the chaotic development in the area. This in turn, led to the emergence of many informal settlements and slums along the Abuja-Keffi axis.

Conflicting views exist on whether informal settlements are harmful or beneficial, whether they have any advantage or are a mere nuisance to the economic prosperity, political image and physical outlook of a nation experiencing rapid urbanization and socio-economic transformation. Some writers have dismissed the sector as an abnormality, a nuisance, and a source of chaos and obstacle to the healthy and sustainable development of a modern economy (Fadare, 2017). Others have advocated for the recognition and endorsement of informality in human settlements as a major contributor to the socio-cultural development of a state. More so, residents of the informal settlements constitute an indispensable part of the urban community and are key contributors to the informal sector of the economy (Wahab, 2017). For instance, over 60% of the residents of the informal settlements in GKUA are the major providers of cheap, unskilled and semi-skilled labour in construction companies, transportation industry, security guards, operators of small and medium scale commercial enterprises, street cleaners, waste pickers, gardeners, baby-seaters, drivers, domestic aids to residents of the new

national capital Abuja (Rikko, 2016) and yet, are often neglected by government, organised private sector and relevant planning agencies. Their contributions to socio-economic, physical, cultural growth and development deserve the recognition and attention of policy makers, government agencies, planners and development partners to improve the conditions that would provide a healthier and wholesome environment for living, working and recreation; even more so that the settlements adjoin the nation's capital city which is the eyes of the world.

The thrust of this paper is to examine the nature and drivers of informal human settlements in a rapidly urbanizing and growing urban area in the Greater Karu Urban Area, GKUA. The objectives of this paper are therefore to:

- i. Review the concepts and challenges of informal settlements in a rapidly urbanising country like Nigeria;
- ii. Examine the nature of the informal settlements in GKUA; and
- iii. Explore the drivers of growth of informal settlements in GKUA and their physical planning implications.

2. Literature Review

Various terms have been used to define and describe informal settlements, for example: unplanned settlements, squatter settlements, marginal settlements, unconventional dwellings, non-permanent structures, inadequate housing and slums (Yari, 2017) shantytowns, barrios and favelas, in the marginal, leftover land of mostly in cities of the developing world. Informal settlements have been referred to as areas that are not formally planned but are occupied illegally by the dwellers. Similarly, UN Habitat (2015) views informal settlements as areas where housing is not in compliance with current planning and building regulations (unauthorised housing) or as residential buildings built on “planned” and “unplanned” areas which do not have formal planning approval. They could even be illegal development in form of real estate speculation for all income levels of urban and peri-urban residents including both the affluent and the poor (Potsiou & Boulaka, 2012). However not all informal settlements processes are illegal (Wahab & Agbola, 2017). Sometimes a well-planned area could turn in to a slum or an informal settlement, particularly where there is an absence of formal land use planning, provision of basic infrastructure and services or where government and planning controls are weak and ineffective (Yari, 2017).

Informality also arises when land is occupied or developed before the layout is planned (that is when development precedes preparation of approval of layout or development plans or the provision of infrastructure, as typified in pre-colonial and many post-colonial settlements in Nigeria. Even in recent years, studies have shown that more than 60% of developments in the urban centres still precede planning approval (Fadare, 2013) and therefore manifest as unauthorised, self-built and self-regulated development without planning or formal government interference or involvement (Fadare, 2017). The

settlements are also characterised by unauthorised use of vacant or public or private land, illegal subdivision and or rental of land, unauthorised construction of structures and buildings, reliance on low cost and locally available scrap construction materials, absence of restrictive standards and regulations, reliance on family labour and artisanal techniques for construction and non-availability of mortgage (Srinivas, 2003). Informal settlements are therefore perceived as residential areas where the inhabitants have no security of tenure vis-à-vis the land or dwellings they inhabit, with modalities ranging from squatting to informal rental housing, lack or inadequate basic services and infrastructure, poor public space and green areas as well as disease and violence (UN-Habitat III, 2016).

Informal settlements, slums and other poor residential neighbourhoods are a product of an urgent need for shelter by the urban poor (Adikwu, 2014) which are driven by a range of interrelated factors. For instance, Obinna, Owei and Mark (2010) identified that rapid urbanization in the Less Developed Countries (LDC) with concomitant socioeconomic problems have contributed to the growth of informal settlements. Similarly, rapid urbanization and inadequate capacity to cope with the housing needs of people in urban areas have contributed to the development of informal settlements. Amao (2012) blamed the proliferation of informal settlements in Nigeria on rapid urbanisation, increasing poverty and inequality, uncontrolled growth of informal sector, non-affordability of land and housing shortage. Informal settlements have therefore become the dominant providers of urban land and housing particularly for the poor and rural migrants in urban areas of the country. They are also a manifestation of the failure of urban planning in Nigeria to provide basic housing and amenities to the teeming urban poor.

According to UN Habitat (2015) informal settlements and slums are caused by a range of interrelated factors, including population growth, rural-urban migration, lack of affordable housing for the urban poor, weak governance (particularly in the areas of policy, planning, land and urban management resulting in intense land speculation or land grabbing); economic vulnerability and underpaid salaries or wages, discrimination and marginalization, and displacement caused by conflict, natural disasters and climate change. Earlier, UN-Habitat (2003) had argued that informal settlements were products of failed policies, poor governance, corruption, inappropriate regulation, dysfunctional land markets, deficient financial systems, fundamental lack of political will as well as the inability of the planning system to address the needs (especially housing) of the whole urban communities. The heavy demand for housing and the inability of government and public agencies to provide low cost housing stock to the majority of the urban poor in locations they desire compel most medium and low income households to re-sort to the informal housing markets for housing supply (Gunter, 2014). Informal settlements are not marginal actors in the real estate markets, but play an important role in influencing housing supply and demand market. In most instances, low and medium income household earners rely on the private land market, vendors, land hoarders and traditional authorities, even corrupt public officials, who subdivide lands and re-sell at affordable prices to prospective house developers. Plot

sizes depend on what the developer could afford and for the urban poor, Ayo (2014) has argued that plot sizes of 15m X 10m (50ft X30ft) are normally adequate for basic shelter.

Wahab and Agboola (2017) have argued that the absence of development plans for rural and urban settlements, politics, corruption; imperfect land market; increasing land and housing prices, and service cost; over-commercialisation of housing development process, lack of access to credit; as well as neglected and inadequate government acquisitions are contributors to the development of informal settlements. UN-Habitat (2013) had earlier noted that lack of detailed regulatory urban plans and cumbersome procedures to obtain building plan permits affect settlements development. Rikko, Dung Gwom and Lohor (2013) and UN-Habitat (2012) have also observed that weak, ineffective and non-proactive planning policy; lack of institutional capacity and resources to effectively plan and manage physical development at local level as well as weak enforcement of planning and building regulations have influenced the development of informal settlements. Some others have argued that non-adoption of and total disregard for inclusive people-centred urban planning and development; inadequate planning personnel to control and police developments as well as government disregard for the mechanism of the informal land management as the better provider of land to land seekers has driven the growth and proliferation of informal settlements in Nigeria (Oduwaye, 2010; Kadiri, 1995). Though these drivers have been identified over the years, measures employed by various governments or urban managers have not successfully addressed them. This is because of the rapid nature of their growth and the challenges they pose have outstripped the capacities of the authorities for control and management to maintain acceptable standards of physical infrastructure development and provision, environmental safety and sustainable settlement growth. These have facilitated further growth of informal developments and the population living in them. For instance, studies have shown that Lagos alone accounts for over 200 informal settlements (Olawaye & Olajide, 2010); Ibadan, 143; Jos 26 (Wahab, 2017); GKUA, 17 (UN-Habitat, 2012); Abuja, 15 (Wahab, 2013) while Port Harcourt had 10 among others with an estimated proportion of population of over 80% living in them (Olunloyo, 2017; Obinna, Owei, & Mark, 2010). Increase in population without corresponding increase in infrastructure results in overstretching of infrastructure, further decline of existing informal settlements and creation of new ones.

3. The Study Area

Greater Karu Urban Area is a “Planning Area” in Karu Local Government Area of Nasarawa state established in 2001 to among other functions, “control the growth and development of settlements in the designated area with settlements such as; New Karu, Mararaba, Masaka, Korodoma, New Nyanya, Ado, Uke, Auta ba Laifi and their hinterlands” (Rikko, 2016). It shares boundaries with the Federal Capital Territory (FCT) Abuja to the west, Keffi Local Government Area to the east, Nasarawa LGA to the south and Jaba Local Government Area of Kaduna state to the north (see Figures 1 & 2). GKUA is the largest urban complex in central Nigeria and one of the fastest growing urban area in the world,

with an annual growth rate of over 40 percent (Vilo, 2012). This exponential population increase has influenced the rapid physical growth of settlements both in size and number; leading to unplanned (informal) and spontaneous developments with complex challenges of inadequate infrastructure, environmental degradation, unemployment, poverty and short fall in service delivery resulting in the development of slums and urban sprawls (Rikko, 2016; UN-Habitat, 2012). These settlements have been described as a conurbation of slums (informal settlements) (Rikko, Dung Gwom, & Lohor, 2013) an abnormally, a nuisance, a source of chaos and obstacle to healthy and sustainable development of the Federal Capital City (UN-Habitat, 2012).

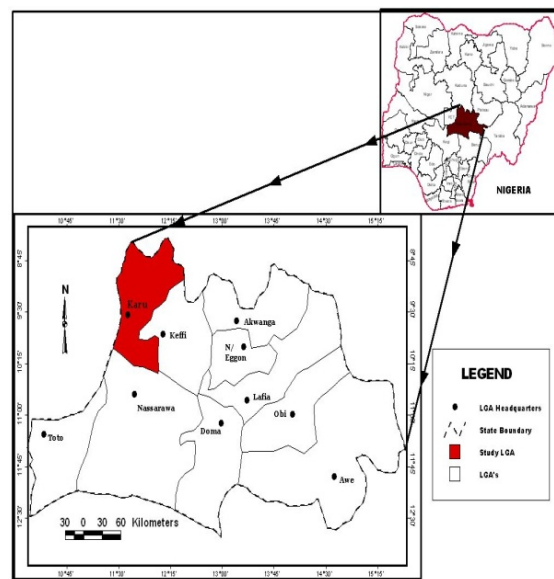


Figure 1. Karu LGA in Nasarawa State

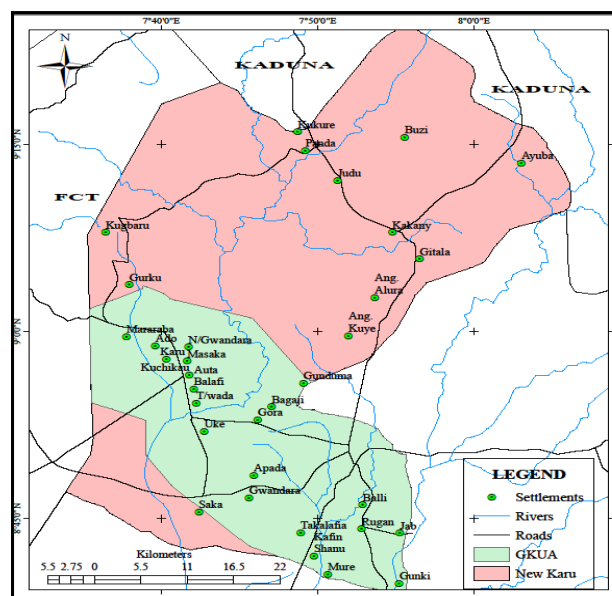


Figure 2. GKUA in Karu LGA

4. Method

Data for this paper were obtained from primary and secondary sources. Data obtained from existing sources are secondary data. These included online materials, journals articles, text books, unpublished postgraduate thesis and dissertations. Data obtained from the application of the questionnaire and observation are primary data. Digital photographs depicted the environmental infrastructural condition. Satellite images from Google earth 2012 covering the settlements in GKUA provided information on the density of the area. From the image, the settlements were gridded into a 0.5 kilometre by 0.5 kilometre grids/cells and each cell given a number identity. A systematic sampling technique was employed to select sample study cells from each cluster of density areas. A total of 571 grid cells covered all the settlements in GKUA with 234 (41%) grids being built-up while 59% accounted for open and vegetated areas. Of the 41% built up area, about 48 grids covered the high density areas of the settlements out of which 17 informal settlements and slums were identified for study (see Figure 3 and Table 1).

From a sample frame of 17 informal settlements within GKUA (UN-Habitat, 2012) a sample size of 4 or 32% of the settlements were selected through purposive sampling based on the housing population of the settlements to include: Mararaba, Masaka, New Nyanya and Kuchikau (see Table 1). A 10% or 253 households were also randomly selected based on availability of the respondents to provide information through the questionnaire in the four settlements. A structured questionnaire was developed for data collection on the socio-economic and demographic characteristics of respondents of both inner core slums and the peri-urban areas. Respondents indicated the nature and drivers of the growth of the informal settlement of their residence as well as their perceptions on the challenges/characteristics of the settlements (See Appendix A). Accordingly, 241 (95.3%) of the questionnaires were returned completed and used for the study (see Table 1).

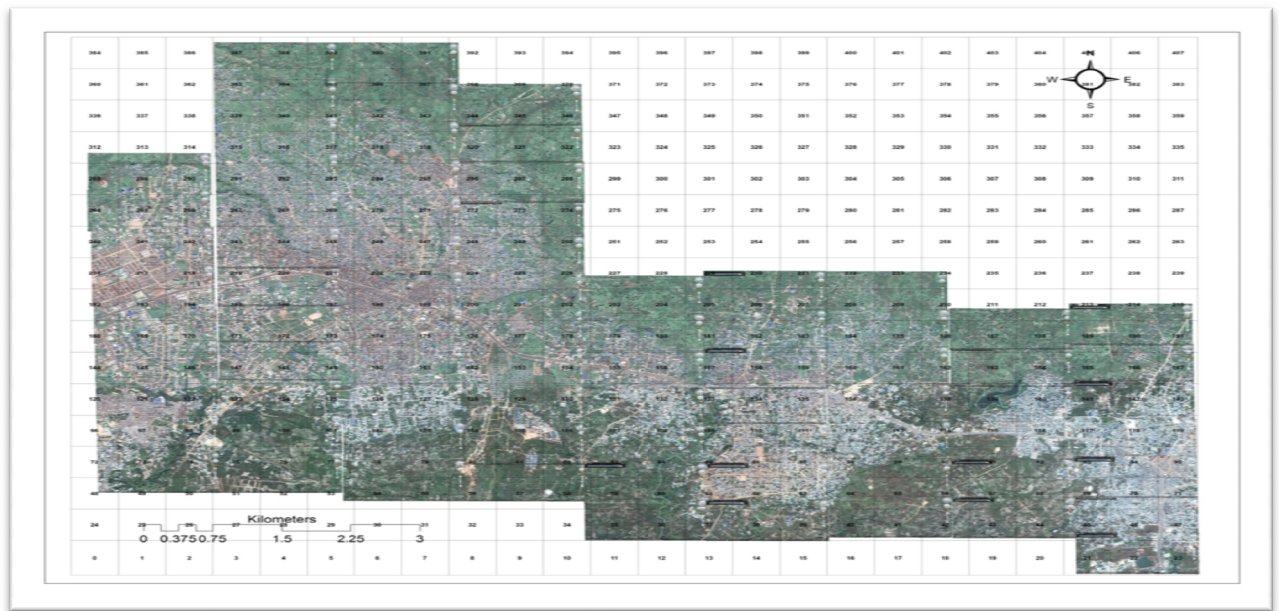


Figure 3. Gridded Built-Up Informal Areas of GKUA (Google Earth, 2012)

Table 1. Informal Settlements in GKUA

S/N	Name of Settlement	Total number of Grids	Sample Grids	Approximate number of Houses per grid	32% Sample	Questionnaire Returned	Percentage of questionnaire returned
1	Mararaba	8	1	882	88	83	34.4
2	Ado	2		231			
3	One Man Village	3		332			
4	Masaka	5	1	627	63	61	25.3
5	Kabayi	4		1027			
6	Aso	2		712			
7	New Nyanya	4	1	549	55	53	22.0
8	Gurku	2		465			
9	Zhewu Road	1		236			
10	Korodoma	1		451			
11	Nyanya Gwandara	4		476			
12	Kuchikau	2	1	468	47	44	18.3
13	Adon Kasa	1		361			
14	New Karu	4		455			
15	Auta ba Laifi	2		382			
16	Tudun Wada	1		247			

17	Uke	2		226			
	Total	48	4	8127	253	241	100

5. Findings and Discussion

5.1 Nature and Characteristics of Informal Settlements in GKUA

The findings of the study showed a very high prevalence of informal settlements or slum neighbourhoods in GKUA. According to UN-Habitat (2012) GKUA had about 17 informal settlements/slums in 2012 while Rikko (2016) showed an increase to more than 30. This indicated that informal settlements were fast increasing in number with further high propensity for future increase if appropriate planning intervention measures were not put in place.

Furthermore, the study identified two categories of informal settlements/or slums in the area. These included: Inner Core informal settlements (traditional slums) and Peri-urban informal settlements.

Inner core informal settlements/or slums were commonly found in the traditional inner core areas of the larger settlements such as Mararaba, Aso Pada, Kabayi, Nyanya Gwadera, New Nyanya, New Karu and Masaka where traditional indigenous buildings and settings were more common (see Figure 4).



Figure 4. Inner Core Informal Settlements in Masaka, New Nyanya and Kuchikau (Traditional slums)

From observation and data gathered from the respondents, the inner core informal settlements were characterised by very high population growth, poor and compact living areas, poor and substandard houses, minimal infrastructure and social amenities, poor sanitation and environmental condition, indiscriminate refuse and waste dumps around living areas, pollution, high occupancy rates, poverty and crime, and inadequate vehicular access. These characteristics were equally viewed by the respondents as the challenges of the settlements which manifested at different degrees of severity. Respondents were requested to assess each characteristics/challenge based on the degree of severity as: very severe, moderately severe and not severe (see Table 2).

Table 2. Characteristics/Challenges of the Inner Core Informal Areas of GKUA

S/N	Severity	Very severe		Moderately severe		Not Severe	
		Freq	%	Freq	%	Freq	%
1	Minimal and inadequate social amenities and infrastructure	214	10.5	24	5.4	3	1.9
2	Rapid population growth	198	9.7	31	6.9	12	7.6
3	Poor accessibility and narrow winding road network	201	9.8	26	5.8	14	8.9
4	Poor and substandard housing	191	9.3	44	9.8	6	3.8
5	Pollution	179	8.7	45	10.0	17	10.8
6	Poor sanitation and environment	213	10.4	14	3.1	14	8.9
7	Indiscriminate waste dump sites	185	9.0	44	9.8	12	7.6
8	High occupancy rate	161	7.9	69	15.4	11	7.0
9	Housing congestion	189	9.2	41	9.2	11	7.0
10	Crime	127	6.2	78	17.4	36	22.9
11	Urban Poverty	188	9.2	32	7.1	21	13.4
	Total	2046	100	448	100	157	100

Note. Respondents indicated more than one challenges in the core areas.

Table 2 revealed the degree of severity of each characteristics/challenge in the area. From the responses, more than two-third of the respondents considered all the characteristics/challenges of the settlements as very severe while less than one-third opined that they were moderately severe and not severe. For instance, 10.5% of the respondents indicated minimal and inadequate social amenities and infrastructure as the most severe challenge and characteristics of the inner core areas while only 1.9% opined that it was not severe. This was closely followed by poor sanitation and environment (10.4%), poor accessibility and narrow winding road networks (9.8%) and rapid population growth. Other challenges perceived as very severe included poor and substandard housing (9.3%), housing congestion (9.2%) while the least very severe challenge and characteristic was crime, and yet, it accounted for more than 6.2%. These were common characteristics and challenges that had contributed to the deplorable state of the inner core areas of the settlements as also observed elsewhere by Fadare (2017) and Habitat III (2016).

Peri-urban informal settlements on the other hand were the emerging informal settlements commonly found at the peripheries of existing settlements which UN-HABITAT referred to as “Peri-urban slums”. These were new neighbourhoods that had developed sporadically and unplanned at the fringes of different settlements manifesting various characteristics and challenges in GKUA (see Figure 5 and Table 3).



Figure 5. Emerging Peripheral Slums in Masaka and Mararaba Showing Very Poor Environmental and Sanitary Conditions

Table 3. Characteristics/Challenges of the Peri-Urban Informal Settlements in GKUA

S/N	Severity	Very severe		Moderately severe		Not Severe	
		Freq	%	Freq	%	Freq	%
1	Absence of social services (pipe-borne Water, sanitation)	227	12.8	12	4.2	2	2.0
2	Absence of infrastructure (schools, health, roads)	216	12.2	11	3.9	14	13.2
3	Rapid population growth	201	11.4	31	10.9	9	8.5
4	Unplanned and uncontrolled development	214	12.1	11	3.9	6	5.6
5	Poor and substandard housing	181	10.2	44	15.4	16	15.1
6	Urban poverty	200	11.3	28	9.8	13	12.3
7	Poor sanitary and environmental condition	211	11.9	24	8.4	6	5.6
8	Poor building materials	167	9.4	55	19.3	19	17.9
9	High level of Crime	151	8.5	69	24.2	21	19.8
Total		1768	100	285	100	106	100

From Table 2, majority of the respondents accounting for 12.8% and 12.2% indicated the absence of social services and infrastructure respectively as very severe challenges/characteristics of the peri-urban areas. Similarly, 12.1% respondents indicated that unplanned and uncontrolled development of illegal housing were very severe challenges and characteristics. This was attributed to rapid population growth resulting from immigration which also accounted for 11.4%. For 10.2% and 9.4% of the respondents, rapid development of poor and substandard housing as well as the use of poor building materials respectively were very severe challenges and characteristics of the settlements as depicted by Figure 5. These were areas where development already preceded planning and infrastructural provisions. As a result, residents relied on self-help efforts for the provision of social amenities and infrastructure

such as boreholes, schools, health care facilities and access roads as also observed elsewhere by Karlson (2012) and UN Habitat (2015). Furthermore, the settlements were affected by very poor sanitary and environmental condition according to 11.9% and urban poverty (11.3%) which made it easy for them to be hide out for criminals and hoodlums largely due to an absence or ineffective and inefficient security measures, particularly where housing development and population were still scanty. From the findings, the study observed variations in the characteristics and challenges between the peri-urban and the inner core informal settlements. For instance, where there were complete absence of social amenities and infrastructure in the peri-urban areas, they were available but in minimal and inadequate quantities in the core areas due to high population that mounted pressure on the available ones. In addition, the degree of severity of the challenges were higher in the peri-urban than the core areas. This collaborate the absence of social and infrastructural facilities in the area.

5.2 Drivers of Informal Settlements in GKUA

Findings from this section revealed that two categories of drivers (internal and external) interplayed either directly or indirectly to orchestrate the growth of informal settlements in GKUA.

5.2.1 Internal Drivers of Informal Settlements

Eight internal drivers were identified as influencing the growth of informal settlements in GKUA (see Figure 6). They are as follows:

a. Availability and affordability of land for development

One of the major drivers of informal settlements in GKUA is the availability and affordability of land for housing and urban development. This was affirmed by 36% of the respondents. The movement of the federal capital from Lagos to Abuja in 1991, accelerated the need and competition for land by various land users thereby exerting pressure and compelled many customary land owners to dispose of their farmlands. Many low and medium income workers from the FCT acquired and developed land without planning approvals or building permits. Particularly between the late 1980s and 2000 when land use planning was at its initial stage and before the area was designated as a “Planning Area” in 2001, development was unguided, haphazard and uncontrolled (Rikko, 2016). The situation is not different today, eighteen years after the area was earmarked and gazetted as a planning area. Development has become more compact and complex in the core areas with attendant challenges. Settlements have sprawled into each other forming an agglomeration of slums along the Keffi-Abuja axis. These settlements are considered as informal due to the absence of approved plans, formal land use planning and inadequate provision of basic infrastructure and services. On the other hand, this is what makes them affordable and attractive to their inhabitants.

b. Peaceful environment

The perception of GKUA as a peaceful urban area influenced one fifth of the residents to settle in the area. Over 20% of the respondents viewed the general security of the area as a major propellant of informal settlement growth. As a result, GKUA has of recent accommodated large migrants from the North East axis, Benue, Kaduna and Plateau states including neighboring local government areas of

Nasarawa State that have experienced Boko haram and Herdsmen violent attacks (Rikko, 2016). This has increased the population of the area along with daunting challenges of rapid illegal housing development without any form of planning approval or control.

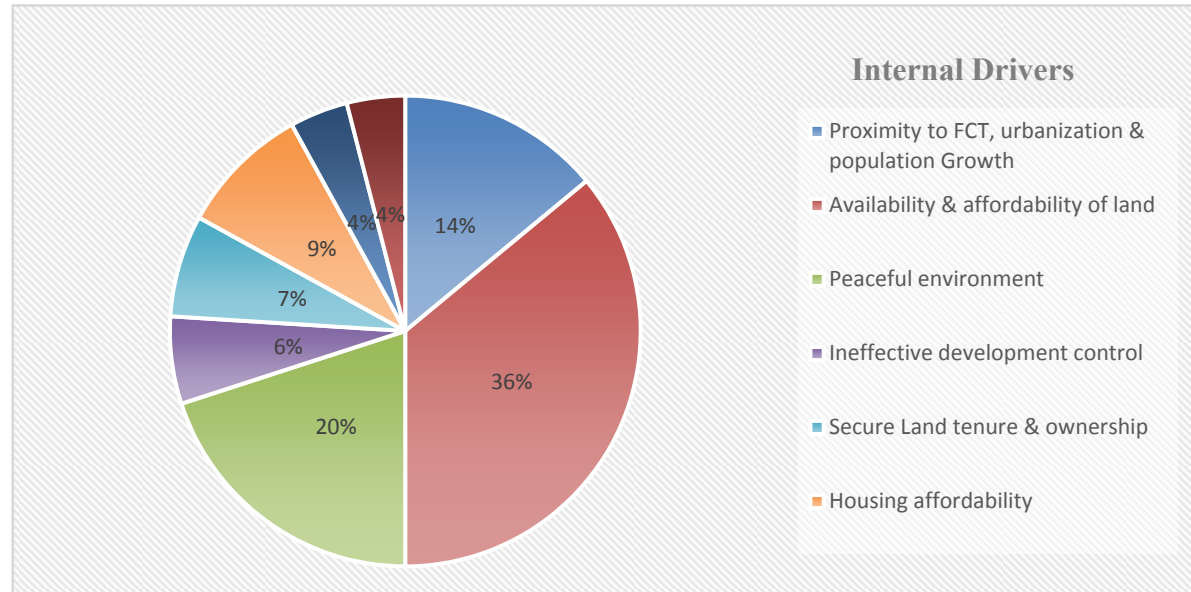


Figure 6. Internal Drivers of Informal Settlements Growth

c. Proximity to Federal Capital Territory, Urbanization and Rapid population Growth

Over 14% of the residents agreed that the proximity of GKUA to FCT Abuja was a major force driving rapid growth of informal settlements in GKUA. The inability of the FCT to provide housing accommodation to its workers, and the demolition of informal settlements in the FCT since 2003 had dislodged more than 1.2 million low and medium income groups (COHRE, 2012) who had relocated to settlements adjoining the FCT including GKUA. As a result, there had been massive influx of immigrants into GKUA leading to demographic shifts, urban expansion and creation of unplanned settlements within the settlements and their peripheries with population rising from a mere 216,000 people in 2006 to more than 2 million in 2012. This growth in urban population was faster than the pace at which urban services such as housing could be provided. Population statistics show that while Abuja grew at 9.3% between 1991 and 2006, Greater Karu grew at an astonishing rate of 22.7% per annum more than twice the rate of the FCC (UNFPA, 2007). Other studies have argued that GKUA was one of the fastest growing urban areas in Nigeria with 40% urbanization rate since 2008 (Vilo, 2012). This will make it one of the fastest growing urban complexes in the whole world.

d. Ineffective development control

Development control in GKUA is highly ineffective and inefficient due largely to inadequate qualified professionals to plan, monitor and manage the development of settlements in GKUA. For instance, findings show that the total number of registered town planners in the Nasarawa State Planning

agencies was less than 30. This was highly inadequate to manage and control the development of a rapidly urbanizing area such as GKUA with an urbanization rate of about 40% and a population of more than 2 million (a ratio 1 planner to 66, 667 population). Consequently, some of the offices were manned and headed by sub-professionals and technical staff that had no training in land use matters. Closely related to it was the weak and ineffective institutional framework which gave room for sporadic and uncontrolled housing development. UN-HABITAT (2012) reported that only between 5%-20% of the properties built in GKUA had approved building plans while 80% had no permit. This was also attributed to the absence of a physical plan (spatial plan), lack of machineries for development, conflicting institutional control over land acquisition processes, poor governance and poor funding for planning activities.

e. Land tenure and ownership

Findings revealed that the predominant land tenure type in GKUA is customary land ownership where land is still in the custody of the traditional owners who willingly subdivide it and sell plots directly or through speculators to potential developers without the permission or approval of the Nasarawa state Ministry of Lands Survey and Town Planning. This process has contributed immensely to the haphazard and uncontrolled pattern of urban and housing development in GKUA. The non-implementation of the 1978 Land Use Act has ensured unrestricted access to indiscriminate sale, acquisition and illegal development of land. Un-Habitat (2012) had reported that only 5-20% of the land have titles or certificates of occupancy in GKUA.

5.2.2 External drivers of informal settlements

The external drivers that have influenced the growth of informal settlements in GKUA are presented on Figure 7. Findings show that without the contributions of external drivers, informal settlement growth would have been quite minimal as that was the case before the establishment of the FCT in 1976.

a. Rapid urbanization and population growth

Rapid urbanization and population growth are perceived in this study as both internal and external drivers of informal settlements in GKUA. Rapid urbanization and population growth are occurring at very unsustainable manner. About 22% of the residents considered rapid urbanisation and population growth as the most important drivers of informal urban growth in the area. Since the official relocation of the federal capital city from Lagos to Abuja in 1991, and greater numbers of people have flogged into GKUA, such that the fabric of life in area has changed in massive ways. The inability of Abuja to accommodate the migrants and the subsequent demolition of informal settlements in FCT pushed large number of people out; putting huge strain on the satellite settlements including the GKUA (Rikko, 2017).

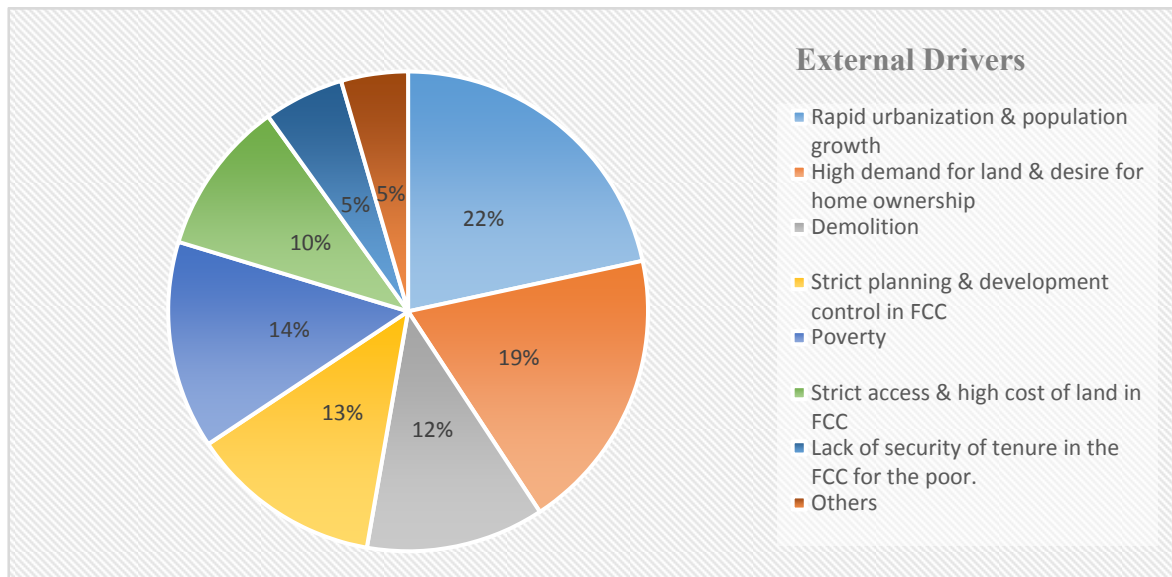


Figure 7. The External Drivers of Informal Settlement Growth

This massive demographic shifts resulted in urban expansion that led to the creation of unplanned settlements in the peripheries of the FCT. This had propelled massive physical growth in the number and size of settlements in GKUA. For example, Nyanya, Masaka, Koroduma, Kodepe (Auta ba Laifi) and One Man Village that were mere farmsteads between 1976 and 1986 have either merged and become a lineal conurbations from Mararaba to Kodepe (Auta ba Laifi) along the Keffi-Abuja high way.

b. High demand for land and desire for home ownership

According to the results, 19.1% of the residents indicated that high demand and competition for land by various land uses have fuelled the growth of informal settlements. This resulted from the growing pace of urbanization, population growth and increase in economic activities seeking to locate close to the FCT. Secondly, the desire to own personal accommodation was a major influence on the growth of informal settlements. Dung Gwom (2008) also observed that the desire to own personal homes fuelled the demand for land and encouraged the “peripherization” of development in Jos. Similarly, the rising cost of housing rent in FCC and GKUA had compelled residents to seek alternatives means of accommodation by building their own houses even in areas that were disaster prone. Despite transportation challenges including traffic congestion that results in hours of traffic hold-ups along the Keffi-Abuja high way, residents preferred to build personal houses in GKUA and trade-off accommodation cost with transport cost. More so, with enhanced personal mobility, workers in the FCT settle in GKUA where land prices are relatively low and commute to the city for work.

c. Strict planning and development control in the FCC

Similarly, about 13% of the respondents indicated that strict planning and development control in the FCC influenced the development of informal settlements in GKUA. Development control is a machinery and/or tool for sustainable management of development which had been effectively

implemented in the FCC. Planning regulations and control were strict and enforced by the Urban and Regional Planning Department of FCDA to ensure sustained physical planning and monitoring of land use development in the capital city. This had created an attractive, liveable and functional environment for the sustainable development in Abuja FCC. However, the stringent processes (time, money and agents requirements) involved in acquiring title documents for land and building plans approval make development processes in FCT cumbersome and stressful (while these were less tasking in GKUA). Consequently, GKUA served as an alternative and attraction location to all developments that had been denied permission in the FCC.

d. Demolition in FCT

In addition, 12.0% of the respondents in the area opined that the demolition of illegal settlements in the FCT in 2003 contributed greatly to the unplanned and illegal development in GKUA, due principally to the exodus of low and medium workers who relocated from the FCT thereby changing the economic and demographic characteristics of the area. Some writers had asserted that more than 1.2 million people had been dislodged from the FCT as a result of the demolition exercise (COHRE, 2012) while some others claimed that more than 2 million people had been rendered homeless since 2003 (UN-HABITAT, 2012). GKUA has remained a major recipient of low and medium workers from the FCC Abuja. This had not only increased the population of the area but majorly influenced the physical growth and expansion of the settlements in GKUA.

e. Poverty

Informal settlements and or slums are usually perceived as a physical and spatial manifestation of urban poverty and intra-city inequality. In the GKUA, over 14% of the respondents indicated that poverty was a major influence on the growth of informal settlements. Reports by the World Poverty Clock (2018) had revealed that poverty levels had risen so high in Nigeria with 86.9 million (50%) of Nigerians now living in extreme poverty while some reports had even indicated that Nigeria is currently the poverty capital of the world. This were manifested in the type and condition of housing accommodation as well as the environment that most of the urban poor live in (see plates 6 & 7). Informal settlements such as in the GKUA accommodate the low, medium and even high income groups. Yari (2017) had also affirmed that in Katsina town, informal settlements were not only for the urban poor, but also many wealthy members of the society resided in them. This he attributed to the difficulty in obtaining land and housing through established legal means or processes. Majority of the residents in these areas live in extremely deprivation and in environments that were dehumanising and characterised by poor sanitary conditions, pressure on limited infrastructure, poor access to clean water, unreliable electricity, inadequate housing and homelessness.

f. Strict access and high cost of land in FCC

Over 10.4% indicated that higher prices of land in the FCC made land unaffordable by the low and medium income groups and therefore induced spill over pressure on GKUA. Land has assumed the

value of an important economic commodity and a source of revenue particularly for households that had parcels of farmlands. Land which was not a tradable commodity before 1980s as observed earlier by Rikko (2001) had acquired speculative value with a thriving market in the area. Even with the increase in land prices in GKUA, it has remained a viable residential alternative to the FCC, where land prices are prohibitive and well beyond the reach of the low income earners living in the FCT.

g. Lack of security of tenure in the FCC or the poor

Furthermore, 5.4% of the respondents considered lack of security of tenure for the poor in the capital city as one of the factors that influenced the decision of respondents to prefer to build houses in GKUA where development control is less stringent thereby leading to the proliferation of illegal developments which resulted to the informal settlements the area. The possession of legal titles to land and property guarantee the security of tenure of all developments in urban areas. While majority of developers in GKUA had no legal titles to land and/or planning permission before development, possession of legal documents are pre-requisites to all developments in the FCC, the absence of which leads to demolition.



Figure 8. Make Shift Housing in Core Areas of Mararaba Town Which Accomodates Beggars, Im-Migrants, Unemployed, Water Vendors, etc. Generally a Crime Ridden Area and Hide out for Criminals

6. Conclusion

The study has established that there was a proliferation of informal settlements in Greater Karu Urban Area (GKUA) which had emerged both in the core and at the peri-urban areas. The settlements were characterised by several challenges ranging from an absence of social amenities and infrastructure, rapid urbanisation and population growth, poor access to water, sanitation and winding road networks, poor housing quality, poor environmental condition and pollution, unplanned and uncontrolled development to poverty and crime amongst others.

The study also found out that the growth of the informal settlements had been driven by internal and external forces. The internal drivers included: availability and affordability of land, peaceful environment and proximity of the settlements to the FCT, affordable housing and poor development

control. Rapid urbanization and population growth, high demand for land, strict planning control, demolition of slums and high cost of land in the FCT were the external drivers that facilitated the rapid growth of informal settlements in GKUA. These findings were coupled with the constraints and absence of an effective planning framework, weak, ineffective and inefficient development control machinery, which gave rise to the proliferation of illegal developments resulting to informal settlements. In addition, inadequate qualified planners and lack of political will provided an avenue for self-regulated, uncoordinated and uncontrolled housing development devoid of spatial planning.

7. Recommendations

This paper recommends that there should be a search for ultimate sustainable urban form that could respond to the pattern and context of GKUA; a comprehensive vision with clear spatial plan that could favour and support the physical, social, economic and environmental policies that would holistically guide physical and land use development, encourage coordinated urban growth/development and forestall the proliferation of informal settlements.

There is a need for new linkages and collaborations across the federal and state governments of all the states adjoining the FCT such as Nasarawa, Niger, Kogi and (possibly, Kaduna and Plateau) to address the dreaded supra-FCT challenges such as urbanization, population explosion and daily influx, service and infrastructure needs, rapid growth of settlements, environmental quality and insecurity that have spilled from the FCT into the adjoining states.

Priorities of the Nasarawa state and Karu Local Government should be on interventions to promote quality of life through the provision of the essential public services and infrastructure such as pipe borne water, electricity, feeder roads, sanitation including employment opportunities in order to support better living standards and human capital. This could be achieved through Public Private Partnership (PPP) and synergy with Community Based Organizations (CBOs), Faith Based Organizations (FBOs), Non-Governmental Organizations (NGOs), International organisations (WHO, UNDP, UN-Habitat, etc.) as well as private individuals and entrepreneurs who are willing to contribute to the development of the settlements.

The Nasarawa State government should employ as a matter of urgency additional qualified Urban Planners (and other environmental specialists) who should initiate more pro-poor development policies and responsive planning schemes that promote an inclusive yet environmentally sensitive GKUA.

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Appendix-A

The Questionnaire on the Assessment of Informal Settlements in Greater Karu Urban Area (GKUA), Nasarawa State, Nigeria

A. Socio-economic and Demographic characteristics of the Respondent

- 1). Age of respondent.....
- 2). Gender: (a) Male ☐ (b) Female ☐
- 3). Marital status: (a) Single ☐ (b) Married ☐ (c) Divorced ☐ (d) Widowed ☐ (e) Separated ☐ (e) Others
- 4). What is your level of education? a) Primary ☐ (b) Secondary ☐ (c) Tertiary ☐ (d) None ☐ (e) Vocational ☐ (f) Others (specify)....
- 5). What is your occupation/Nature of work? (a) Civil/Public servant ☐ (b) Trading/Business ☐ (c) Farming ☐ (d) Private sector employee
- 7). Where is your place of work.....
- 8). What is your average monthly income from all sources?
 - (a) Less than N10, 000 ☐ (b) N10, 001-N20, 000 ☐ (c) N20, 001- N50, 000 ☐
 - (c) N50, 001-N70, 000 ☐ (d) N70, 001-N100, 001 ☐ (e) N100, 001-N150, 000 ☐
 - (f) N150, 001-N200, 000 ☐ (g) N200, 001 and above ☐
- 9). What is your state of origin?

B. Drivers of Informal settlements in GKUA

10). Indicate the drivers (factors) for the growth of this settlement? (Tick as many drivers within the appropriate box)

S/No	Drivers (Factors)	Internal drivers	External drivers
A	Proximity to the Federal Capital Territory		
B	Relatively cheap and affordable accommodation		
C	Relatively cheap and affordable land for development		
D	Increase demand for land/ownership		
E	Land market and tenure system		
F	Political influence on planning of the area		
G	Available land for development		
H	Less stringent development control process		
I	Rapid urbanization		
J	Security of tenure		
K	Economic and business opportunities		
L	Employment opportunities		
M	Presence of infrastructural facilities and services		
N	Good governance		
O	Peaceful environment		
P	Security		
Q	Others (specify)		

11). Which of these are pushing people away from the FCT to reside in GKUA?

- (a) Inadequate and high cost of housing rent/accommodation
- (b) High cost of land for development
- (c) Demolition in parts of the FCT
- (d) Strict planning and development policies and procedure
- (e) Strict access to land
- (f) High standard of living
- (g) Limited land for large scale development
- (h) Lack of Security of tenure
- (i) Heavy traffic congestion
- (j) Others (specify).....

12). Which of these would you consider are the major factors making people to leave the FCT to settle here?

.....

13). Who owns the house that you live in?

- (a) Personal house ☐ (b) Family house ☐ (c) Renting ☐ (d) Company/organization
(e) Others (specify).....

14). Do you own any property within Greater Karu Urban Area?

- (a) Yes ☐ (b) No ☐

15). If yes in Q15, how did you acquire the land?

- (a) Inheritance from the family ☐
(b) Direct purchase from customary landowners ☐
(c) Purchase from land speculators/agents ☐
(d) Allocation by the Government ☐
(e) Through Gift ☐
(f) Lease ☐
(g) Others, (specify).....

16). What is the size of your plot?

- (a) Less than 15m x 15m (50ft x 50ft)
(b) About 15m x 30m (50ft x 100ft)
(c) About 30m x 30m (100ft x 100ft)
(d) More than 30m x 30m (100ft x 100ft)
(e) 1 hectare (10,000m x 10,000m)
(f) More than 1 hectare (specify the size)-----

17). Provide the cost of Land per plot in the area according to the years of purchase.

Year	Cost per plot	30mx30m	30m x45m	30m x60m	1hectare	Location of the plot	Type of use
Before 1976							
1977-1990							
1991-1995							
1996-2000							
2001-2005							
2006-2010							
2011-2013							

18). How much did you buy your plot?

19). What type of title rights do you hold on the land?

- (a) Local Agreement () (b) Local Government Right of Occupancy () (c) State Government R of O
 (d) State Government C of O () (e) Local agreement and LG R of O () (f) Local agreement and State
 R of O (g) State R of O and State C of O () (h) None of the above

20). Is the land developed? Yes [] No []

21). If yes to question 21, which year did you develop it?

22). Did you obtain permission from any planning authority before the development?

(a) Yes [] (b) No []

D. Residents Perception of the Challenges/characteristics of the informal settlements

23). What are the challenges/characteristics of this settlement? (Tick as many options within the appropriate box)

S/No	Challenges/Problems	Very severe	Moderately severe	Not severe
A	Rapid Rate of Urbanization and Over Population			
B	Problem of land acquisition			
C	Encroachment On land			
D	Rapid and uncontrolled development			
E	Rapid expansion of the settlements			
F	Indiscriminate sale of land			
G	Speculation and vibrant land market			
H	Urban poverty			
I	Poor refuse/waste collection/disposal			
J	Lack of pipe borne water			
K	Lack of electricity			
L	Poor and inadequate services/facilities			
M	Illegal development			
N	Traffic congestion			
O	Housing congestion			
P	Poor housing quality			
Q	Poor attitude to environmental quality			
R	High crime rate and insecurity			
S	Unorganized shopping areas			
T	Pollution (air, noise, odor)			
U	Others (specify)			

24). What are the implications of these challenges on the following? (Please use the back of the questionnaire if the space provided is not adequate)

- i. Housing development ii. Environmental condition.....
 iii. Infrastructure and services..... iv. Land Tenure and property market?.....
 v. Livelihoods and employment..... vi. Physical planning and management of the growth of the area?.....

25). What type of house do you have? a) Bungalow [] (b) Flat [] (c) Storey building [] (d) Compound [] (e) Semi-detached [] f) Room and parlour [] (g) Single rooms [] (h) Others (specify).....

26). Indicate the availability and adequacy of the following facilities in the house

Facility	Availability		Adequacy			Condition		
	Yes	No	Adequate	Not Adequate	Very Good	Good	Fair	Poor
Water supply								
Electricity								
Toilet								
Bathroom								
Kitchen								
Sewage								
Drainage								

27). Sources of water supply i) Well [] ii) Borehole [] iii) Stream [] iv) Dam [] v) Portable pipe borne in the house [] vi) Itinerary tankers (Water purchase) [] v) Others (specify).....

28). Sources of energy: i) Electricity [] ii) Kerosene [] iii) Solar [] iv) Candle [] v) Others (specify).....

29). Sources of power for cooking: i) Firewood [] ii) Electricity [] iii) Charcoal [] iv) Kerosene [] v) Others (specify).....

30). Type of Toilet Facilities in the house: i) Water Closet exclusive [] ii) water closet shared [] iii) Pit latrine exclusive [] iii) Pit latrine shared [] iii) Bucket system [] iv) None []

33). Type of Bathing facilities in the house: i) Exclusive in the house [] ii) Exclusive and shared [] iii) Exclusive in the compound [] iv) None []

34). Type of Kitchen Facilities in the house: i) Exclusive in the house [] ii) Exclusive in the house and shared [] iii) Exclusive in the compound [] iv) None []

35). Condition of the Building

Building	Condition			
	Very Good	Good	Fair	Poor
Walls				
Roof				
Floor				
Windows				
Doors				
Ceiling				

36). Housing Environmental Condition

- a. Is the surrounding littered with refuse? i) Yes [] ii) No []
- b. Are there bushes around the house? i) Yes [] ii) No []
- c. If yes, are they well kept? i) Yes [] ii) No []
- d. Types of refuse generated in the house.....
- e. Frequency of refuse disposal in your house: i) Removal daily [] ii) Removed weekly []
iii) Removed monthly [] No refuse disposal system []
- f. Is there a refuse dump close to the house? i) Yes [] ii) No []
- g. Is there air pollution in the area? i) Yes [] ii) No []

37). How would you rate the following Neighbourhood Facilities in the area?

Facilities	Availability		Condition			
	Yes	No	V/Good	Good	Fair	Poor
Access Roads						
Drainage						
Waste collection/disposal						
Sewage system						
Play ground						
Healthcare						
Police station						
Fire service						
Shopping/market						
Primary school						
General Environmental sanitation						